

## CENTRAL INTELLIGENCE AGENCY

## INFORMATION REPORT

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SECURITY INFORMATION

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COUNTRY	East Germany	REPORT	
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This is UNEVALUATED Information

THE SOURCE EVALUATIONS IN THIS REPORT ARE DEFINITIVE.  
THE APPRAISAL OF CONTENT IS TENTATIVE.  
(FOR KEY SEE REVERSE)

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Chlorination kiln

1. Work on this project has now been completed. The kiln has been delivered to the Russian authorities and has left the factory. It was finally packed in about 10 crates and dispatched to Leuna. Each crate was inscribed in Russian and German, and marked "place of dispatch: Leuna." The receiving address was:

Kraftwerk der Sued Ural Eisenbahn	(Translation) (Electric Station of the South Ural Railroad)	(in Cyrillic) Poluchatel Elektrostantsiy Yuzh Uralskoy Zh D
Betrieb des Direktors Karjagin	(Concern of Director Karyagin)	Predpriyatiye Direktora Karyagina

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2. The final form of the kiln was as shown on the attached sketch. It was tested with an ilmenite-sand mixture (10:90). A daily production of  $\frac{1}{2}$  ton mixture was achieved. The ilmenite was completely chlorinated but the greater proportion of the  $TiCl_4$  so produced went up the chimney. It was found that this could be retained if the effluent gases were washed with water (sic) but this was not done because it was too complicated. It was tried for about a quarter of an hour and the final results for the acceptance committee fixed so that it appeared as though all the test runs were conducted in this manner.

Calcium distillation.

3. This project (for the reactivation of the distillation plant) has been allowed to drop.<sup>1</sup>

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STATE	X	ARMY	X	NAVY	X	AIR	X	FBI		AEC		ORR	Ev	X	OSI	Ev	X
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(Notes: Washington Distribution Indicated By "X"; Field Distribution By "#".)

25 YEAR RE-REVIEW

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Aluminum production.

4. 99.5%. Production in Work I is at present about 1,500 tons<sup>2</sup> per month. Works II is not yet in operation, in fact the old plant is still in the process of being dismantled.
5. 99.99%. Production is about 10 tons per month. Most of this is said to be sent to the East German factories making electrolytic condensers and a smaller part used for the manufacture of apparatus.
6. Alumina from clay. A plant with a 200,000 tons production capacity per year is being planned but will certainly not be ready during 1953. It will probably be erected near Lauta rather than Bitterfeld and will operate the combined process (Specketer - Penjakoff) and the Specketer process, returning the Specketer mother liquid for work-up by the combined process as previously reported.<sup>3</sup> At the moment experiments are under way to simplify the further work-up (splitting off of HCl) of the Tauchbrenner product. It is hoped to be able to process this further without preliminary filtration as at present, i.e. to feed the decomposition kilns with a much wetter material than at present.

Magnesium

7. Metal: The site for the plant is still being cleared. The plant is to produce 20,000 tons per year.
8. Anhydrous chloride: Experiments have gone well and are virtually completed. The  $MgCl_2$  solution is reduced to  $MgCl_2 \cdot 6H_2O$  by a spray drying process. This is further dehydrated to  $MgCl_2 \cdot 0.2H_2O$  (overall composition) in a rotating kiln and this product further completely dehydrated in a stream of HCl. Responsible for this work was Dr. Bauer who will manage the magnesium plant when erected.

Titanium metal

9. Laboratory experiments in the production of titanium have gone well. Titanium mud or sludge is being produced in lots of about 100 gm. using the Koll process ( $TiCl_4 + Mg$ ). Instead of using a noble gas to produce an inert atmosphere, EKB uses the  $TiCl_4$  vapor itself.  $MgCl_2$  and superfluous Mg are later distilled off in vacuo leaving a more or less pure or ductile titanium. The purity has not yet been exactly determined.

Germanium

10. Dr. Wehnert recently had an analysis made of the flue dust from the EKB furnaces. It was found to contain Ge to the extent of .02% (20 mg. per Kg.). No analysis was made of the furnace ash and it is not known if any attempt is to be made to recover this small quantity.

Fluorine

11. EKB is to drop its fluorine separation program. Radebeul has also ceased fluorine production for lack of customers, but the Freon 12 plant is still in operation there.

Other chemicals

12. Boric acid: The plant is now operating on a one shift basis and is shortly to cease operating. Production will be taken up by an unspecified small firm.
13. Sulphuric acid: The  $H_2SO_4$ -from-gypsum plant is not in action yet and con-

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sequently there is a great shortage of  $H_2SO_4$ ; one result has been that for about a month the  $HCOOH$  (formic acid) plant has been out of action.

14. Iron powder: Production continues as usual.
15. Acetone: This product is in very short supply.
16. Fluorinated PCU: This work has proved very difficult and no real success has been achieved.
17. Rhenium: No use has yet been found for the Mansfeld rhenium. It is rumored that the plant was built mainly to win a national prize.
18. Carbonyl iron: A research order was recently (in 1953) given to EKB to investigate this process. It was later cancelled with the comment that it was a mistake since Leuna was already working on it. It is known that there is a pilot plant in production at Leuna.
19. New metal research laboratory.

A new building is being erected between the present metal laboratory and building 139. When it is completed, all the occupants of the old building, including the metal laboratory itself, will move into it. A new "light metal research laboratory" will be established in the old building which will serve not only EKB but the whole of East Germany.

20. Personnel changes, etc.:

- a. Dr. Otto Seipold - Director for research and development.
- b. Dr. Bauer - Departmental head of light metal production.
- c. Dr. Ostermann - Departmental head of light metal processings.
- d. Dr. Karl Siedentopf - Works manager of aluminum works II (not yet built).
- e. Dr. Braeuning - Works manager, chlorine works I and II.
- f. Dipl. Chem. Dombois - Works manager oxygen works (in addition to existing commitments).

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- c. There was a half hour strike in the steel works recently (sic) because of dissatisfaction with pay conditions.

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BUNKER CONTAINING "FEED"  
I.E. BRIQUETTES OF SAND,  
ILMENITE & POWDERED CARBON,  
WITH SMALL GRAPHITE NODULES  
FOR ELECTRIC CONDUCTION.

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20 M.  
30 CM.  
10 M.  
60 CM.  
c. 200°C  
IRON  
FeCl<sub>3</sub>  
GAS HEAT EXCHANGER  
WASTE GAS  
TiCl<sub>4</sub>

730°-1000°C  
CL<sub>2</sub> IN  
8 MM. IRON HOUSING  
REFRACTORY BRICK  
REFRACTORY Cl<sub>2</sub> RESISTANT LINING  
GRAPHITE ELECTRODES  
250 mm. Ø  
{ 20 KW INPUT }  
WATER  
WASTE

FINAL APPEARANCE OF  
CHLORINATING KILN

DIMENSION AS INDICATED, OTHERWISE  
NOT TO SCALE.

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